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## THE NUMBER $\pi$ IN CHRISTIAN PROPHECY.

RELIGION everywhere consists of that set of sentiments which is inspired by man's world-conception, and the great significance of religion appears in its application to conduct, especially toward the powers that are supposed to sway our destinies. Religion, accordingly, is the product of the most impressive knowledge of the age in which its doctrines have originated, and being of a conservative nature, it is natural for it to always lag behind the progress of the times. Authority is a great factor in religion; and thus it happens that established authority which cannot but be the authority of the past, predominates over the authority of the present, represented in the maturest knowledge of the day.

How much of the science of a very distant past is contained in some of the factors that shaped Christianity, will appear from the following consideration of the echo of mathematical knowledge which has reached us in mystical and distorted prophecies, while the original idea is still traceable in the different modes of its manifestations. It is the number of the cycle of an age, or any time represented by a circle, in which life begins a new era repeating cyclical events.

The most obvious cycle in the course of earthly affairs is the year, and the events of one year approximately predict the happenings of all others. The same may be said of the phases of the moon and of the daily course of the sun.

Time rolls in cycles, and the most significant number for calculating the length of a cycle is the number which represents the relation of the diameter of a circle to its circumference. This number, which since the days of Greece has been called  $\pi$  (as the initial of the Greek word *periphēreia*\*) was approximated in very primitive times in the number  $3\frac{1}{2}$  or seven halves, and it is rather surprising that our biblical exegetists have not stumbled on it in the explanation of the several passages which have so far proved a perplexity to interpretation. In fact, the writer of these lines once communicated his suggestion to a very prominent scholar of eschatological literature, who discarded it with an incredulous smile, declaring that evidence was missing. Yet any one who will consider the several passages in question will agree that the number  $3\frac{1}{2}$  which is met with so frequently in the book of Daniel, the Revelation of St. John, and other prophetic books (especially those that deal with eschatological subjects) can only refer to the number of the cycle, and it can scarcely be doubted that *three times and a fraction* as well as *after three days* which means three full days and a little more, are nothing else but expressions of the same idea.

It seems that most of the prophets firmly believed in the reliability of the number  $\pi$ , counted as  $3\frac{1}{2}$  (or approximately  $3\frac{1}{2}$ ) and their difficulties consisted simply in their attempts to make their calculations agree with facts. They were not sure whether to compute the number of a period in hours, days, months, lunar years or solar years; whether or not to consider leap-days and leap-months etc., but the idea of the number of the cycle is obviously uppermost in their minds in all their mystical references to any periods of time.

The number of the cycle is expressed in a mysterious form as  $1+2+\frac{1}{2}$ . It is unity plus duality plus unity

\* περιφέρεια.

divided by duality. In another place it is called "one thousand three hundred and three score days," which is simply three and a half years when the year is counted according to ancient Babylonian fashion as 360 days, the five and a fraction additional days being considered super-numerary.

In the Revelation of St. John (xi, 3) we read:

"And I will give power unto my two witnesses, and they shall prophesy a *thousand two hundred and three score* days, clothed in sackcloth."

The same story continues, with reference to another period of three days and a half (verses 7, 9 and 11):

"When they shall have finished their testimony, the beast... shall overcome them and kill them... And they of the people and kindreds and tongues and nations shall see their dead bodies *three days and an half*, and shall not suffer their dead bodies to be put in graves... And after *three days and an half* the Spirit of life from God entered into them, and they stood upon their feet."

In Daniel xii. 7 we read concerning the period of Israel's tribulation:

"And I heard the man clothed in linen, which was upon the waters of the river, when he held up his right hand and his left hand unto heaven, and sware by him that liveth for ever that it shall be for *a time, times, and an half*; and when he shall have accomplished to scatter the power of the holy people, all these things shall be finished."

"A time, times, and an half" are three and a half, (the plural "times" standing for the simplest plural number which is "two"), the same period that is allotted, as a respite from the persecutions of the dragon, to the woman who is to bear the apocalyptic Christ (Rev. xii, 14). There we read:

"And to the woman were given two wings of a great eagle, that she might fly into the wilderness, into her place, where she is nourished for *a time, and times, and half a time*, from the face of the serpent."

The woman is persecuted by the dragon and stays in the desert 1260 days, which, as we have seen, is three years and a half.

The number  $\pi$  appears frequently in the Apocryphal books, especially the book of Enoch, and the fourth book of Esdras. In Esdras xiv, 10 ff., the number  $10\frac{1}{2}$  plays the same part and this is simply a multiple of  $3\frac{1}{2}$  by 3.

The numbers 1290, 1335 and 2300 which also occur in various prophecies, are only other computations of the number of the cycle on the basis of different principles. The last mentioned is found in Daniel viii, 14, where we read:

"And he said unto me, Unto *two thousand and three hundred days*; then shall the sanctuary be cleansed."

The translation here is not exact, and perhaps cannot be, for the text is corrupt and there are many variants. At any rate 2300 days would be twice three years and a fraction, if the moon year is made the basis of calculation, and so contains the number  $\pi$ . But according to one variant (preferred by Professor Hilgenfeld\*) the meaning appears to be "2300 evenings and mornings," implying that there are 1150 days in which the sanctuary shall remain uncleansed.

The number  $\pi$  (three and a fraction) is expressed in the phrase "after three days," and with this idea it is also mentioned in the book of Jonah where we read (i. 17) that the prophet "was in the belly of the fish *three days and three nights*." He came out after three full days and nights, viz., on the fourth day, and the incident is referred to by Jesus himself when prophesying his resurrection (Matt. xii. 40):

\* For Professor Hilgenfeld's view on the subject see *Die jüdische Apokalyphe*, pp. 32-33. Though he repeatedly mentions prophecies containing the number  $3\frac{1}{2}$ , it is strange that he never thinks of its being the number of the cycle.

"For as Jonas was *three days and three nights* in the whale's belly ; so shall the Son of man be *three days and three nights* in the heart of the earth."

Paul says similarly in Corinthians xv. 4, "he rose again the third day," but here we must bear in mind that a variant reads "after the third day," and it is very probable that the now rejected variant is the original reading. It is natural that as soon as Sunday had come to be regarded as the day of resurrection, and Friday was celebrated as the crucifixion day, the alteration should be made to conform to established church festivals.

Mathematical knowledge, so very important in ancient Babylon, was not cultivated among the early Christians, and hence the original meaning of the number three and a fraction had faded from their minds. Otherwise the Christian church festivals would probably have been so adjusted as to make the period of Christ's sojourn in the domain of death, conform to the traditional notion of a cycle. Christ's death might have been ascribed to Wednesday, or his resurrection to Tuesday, but the former would have disassociated this event from the paschal feast, while the latter would have canceled the only sanction for Christians to celebrate Sunday.

If Christ's own prophecy did not contain the quotation from Jonah, it would most probably have been modified by copyists so as to suit the established church ritual. The accessibility of the original passage preserved the text in spite of the non-conformity with the established fixation of days.

It was highly significant to the early Christians that Christ died as the paschal lamb, and so the Gospels reiterate the statement that the passion took place in the beginning of the paschal feast. A little later when the Lord's Supper began to be celebrated in commemoration of Christ's death, the Saviour was naturally regarded as the

founder of the rite which necessitated the assumption of his having the paschal meal with his disciples. This would fix the date of the crucifixion on Saturday, and reduce Christ's sojourn in hell to one night only, for if there was a thing regarded as firmly established in the Gentile church, it was the belief that the Saviour had risen on a Sunday.

Persian influences, we must remember, were very strong among the Jews of post-exilic times, and the pious sectarians were greatly affected by them. Sunday was then the great festive day of the Mithraists, and the disciples of St. John as well as the Nazarenes celebrated the day by coming together and breaking bread in a common meal. Accordingly, Sunday, the day of Mithras, was considered the fittest day to become the day of the Lord, just as the birthday of Mithras was selected as the most appropriate day for the celebration of Christ's birthday. That Sunday was celebrated prior to Christianity is unquestionably proved by the fact that St. Paul visits in the several cities those circles of "disciples" who had neither heard of the Holy Ghost, nor believed as yet on Christ Jesus (Acts xix. 1-4), and they used to break bread in common on the first day of the week.\*

A compromise between these colliding considerations resulted in setting aside Christ's prophecy "after three days"; but since a dim awe of the significance of the number three was still haunting the imagination of the early Church, the phrase, "after three days" was replaced by the words "on the third day" which suited the occasion, and though it meant something different from the ancient formula, still preserved the mystic ring.

It would become monotonous to follow up all the mys-

\* Cf. also Acts xviii. 25. Simon Magus and Apollos were preachers of a religion that had much in common with Paul's Christianity, but neither of them had heard of Jesus. We must assume that they had many beliefs and customs in common with the early Christians.

tical computations that have been employed to calculate the several periods which were of importance to the religious minds of that age of messianic expectations, but we may be sure that almost everywhere there lurks an approximation of the number  $\pi$  at the bottom of all designations of time which represent a cycle of some kind; the time of tribulation, the time of the desecration of the temple, the time of the triumph of the enemies of Israel, the time of death before resurrection, etc. It is not impossible even, that the millennium is merely the multiplication of a period of 300 day-years by three and a fraction, resulting in the round number 1000, analogous to the computation of 3 times  $3\frac{1}{2}$ , occurring in Esdras.

To us of a later generation, these calculations have become unmeaning, and it is perhaps hard to understand how they could have possessed so much significance to the authors of Daniel, Esdras and the Revelation. We must bear in mind, however, that the underlying principle of this antiquated logic is not wrong and is still recognized by modern science; it is simply the thought that all events are subject to law, and that by knowing the law, we can presage what the future will reveal.

EDITOR.